

REMARKS

The Amendments

The claims are replaced with new claims in order to amend them merely as to matters of form and to better conform to customary U.S. practice. Further, claim 21, replacing claim 1, now recites that the third layer is present, i.e., not optional.

To the extent that the amendments avoid the prior art or for other reasons related to patentability, competitors are warned that the amendments are not intended to and do not limit the scope of equivalents which may be asserted on subject matter outside the literal scope of any patented claims but not anticipated or rendered obvious by the prior art or otherwise unpatentable to applicants. Applicants reserve the right to file one or more continuing and/or divisional applications directed to any subject matter disclosed in the application which has been canceled by any of the above amendments.

The Rejections Under 35 U.S.C. § 112, Second Paragraph

The numerous rejections under 35 U.S.C. § 112, second paragraph, are believed to be rendered moot, in part, by the re-writing of the claims to avoid objected to language. Other objected to language is retained in the new claims and addressed below.

The designator letters for the various components of the invention are retained in the new claims. These do not make the claims indefinite and the rejection based thereon should be withdrawn. It is common in claims to have designators to differentiate between different elements of the invention. There is nothing to suggest that the designators provide some limitation of the component as defined. The inference in the Office Action that there may be such a limitation is not supported on the record. These designators are used simply as an identifier to aid in distinguishing the various elements and this would be clear to one reading the claims in their context.

Reference to the ASTM standard does not render the claims indefinite. The ASTM (American Society for Testing and Materials) standards are very well known in the art. One of ordinary skill in the art would well understand where to find the standards and understand them. Rather than making the claims indefinite they make the claims more definite by providing a strict and time-tested standard by which the property in question is determined. Applicants believe that such standards rarely, if ever, change; rather, if the standard changes a new number would be given to it. The rejection of this term should be withdrawn.

The term "2 to 40% weight insolubles in n-decane at 90°C" is not indefinite. This clearly defines a property determined by the weight percentage range of the component which is not dissolved in n-decane at 90°C. There is no limitation on the nature of the insolubles. Thus, any insoluble parts from the component would be part of the stated weight percentage. One of ordinary skill in the art could readily make such an experimental determination of whether a component falls within the metes and bounds of this recitation. Thus, the rejection of this term should be withdrawn.

The HDPE, LLDPE, VLDPE and LDPE terms are not indefinite. These are well-recognized abbreviations used in the art. Clearly, they were recognized as such by the Examiner in correctly stating their meanings in the Office Action. Use of abbreviations where the meaning is quite clear is not improper. In fact, it is likely preferable to use well known abbreviations to make the claims easier to discern by one of ordinary skill in the art. The rejection of these terms should be withdrawn.

The "unsaturated monomer X" term in claim 13 is not indefinite. The X term is merely a designator for this component, as discussed above. Also, the recitation of a "reaction" generally in this claim is not indefinite. This rejection appears to be improperly based on an allegation of overbreadth. One of ordinary skill in the art knows what a "reaction" is and any reaction of the two stated components which achieves the stated product

would fall within the metes and bounds of this claim recitation. Since this is readily determinable by one of ordinary skill in the art, it is not indefinite. Thus, this rejection should also be withdrawn.

The recitation of "which is capable of reacting to form a crosslinked phase" in claim 17, now claim 37, is not indefinite. If the polyolefin (B) is capable of reacting to form such crosslinked phase then it is within the metes and bounds of the claim recitation. This is readily determinable by one of ordinary skill in the art, thus, it is not indefinite.

For all of the above points, reference is made to Morton Int. Inc. v. Cardinal Chem. Co., 28 USPQ 1190 (Fed. Cir. 1993), establishing that, if one of ordinary skill in the art would understand the scope of the claims when read in light of the specification, they are not indefinite and In re Gardner, 166 USPQ 138 (CCPA 1970) and M.P.E.P. § 2173.04. establishing that breadth of a claim, alone, does not dictate indefiniteness. All of the rejections under 35 U.S.C. § 112, second paragraph, should be withdrawn.

The Rejection Under 35 U.S.C. § 102

The rejection of claims 1, 7, 11-14 and 18 under 35 U.S.C. § 102, as being anticipated by Beuzelin (UK Pat. 2288177) is respectfully traversed.

Beuzelin is principally directed to the make-up of the binder used for a co-extruder layered material which binder is defined by the various options at page 3, line 9, to page 5, line 11. Beuzelin generally discusses the types of polymer layer structures which the binder can be used to bind together at page 12, lines 17-24, and indicates specific layered structures at page 12, line 25, to page 13, line 15.

None of the layers specifically indicated by Beuzelin has a structure with successive layers of (1) a high density polyethylene (HDPE), (2) an ethylene-vinyl alcohol polymer (EVOH) or mixture based on EVOH, and (3) a polyamide (PA) or polyolefin (PO). In the

absence of any such disclosure or any specific teaching to provide a structure having three such successive layers (compare instant claim 21), Beuzelin cannot anticipate the instant claims.

Beuzelin's structure comprising a polyolefin/binder/EVOH/binder/PS, pointed out in the Office Action, does not comprise the recited structure of instant claim 21. First, the binder portion of Beuzelin cannot be considered a layer of the multilayer structure. One of ordinary skill in the art would not consider the binder to be part of one of the layers of the structure. Beuzelin itself does not consider the binder as being one of the layers of the multilayer structure but merely the adhesive keeping the layers together. Second, Beuzelin's binder is not merely a polyamide or polyamide/polyolefin mixture. Beuzelin's binder is always a grafted or co-grafted material and always contains a polystyrene. Further, it is not seen in Beuzelin's binder anywhere that even a polyamide component is present. The only place where any "amide" is referred to is in its use as a grafting monomer. Such use would not provide a polyamide or polyamide/polyolefin mixture. Third, Beuzelin makes no specific indication of a layer containing HDPE as the particular polyolefin layer. While HDPE is listed as one of the possible polyolefins to select from, there is no specific indication of a layered structure with HDPE. Such specificity is necessary to support an anticipation rejection.

For all of these reasons, the rejection under 35 U.S.C. § 102 must be withdrawn. Beuzelin also fails to suggest such a layered structure for the reasons discussed below.

The First Rejection Under 35 U.S.C. § 103

The rejection of claims 2-6, 8 and 19-20 under 35 U.S.C. § 103, as being obvious over Beuzelin, is respectfully traversed.

The distinction of the Beuzelin structures from applicants' invention is discussed above. Beuzelin fails to disclose a structure meeting the recitation of claim 21. Beuzelin also fails to suggest such a structure. Although Beuzelin provides a generic disclosure of possible layers to be combined, there are no teachings which would in any way suggest the specific combination of layers of the instant claims. In fact, all the structures disclosed by Beuzelin contain at least one polystyrene layer (PS), thus, excluding the possibility of a HDPE/EVOH/PA structure. There is certainly no suggestion from the reference to make the specific combination of an HDPE/EVOH/PA structure or that there would be any advantage thereof. At least for this reason, Beuzelin fails to render the claimed invention obvious to one of ordinary skill in the art.

Regarding claim 22, if the argument made in the Office Action that the binder is equivalent to applicants' third layer is correct, then Beuzelin would not disclose or suggest a structure having two layers of binder together with the HDPE/EVOH/PA structure. That is, if the Beuzelin binder is the third layer, then Beuzelin does not disclose both a third layer and a binder layer between the second and third layer.

Additionally, as to claim 23, claim 26 and claims dependent thereon reciting a particular binder, Beuzelin is further distinguished. The possible co-grafted materials in Beuzelin's binders are co-grafts carboxylic acids containing ethylene unsaturation onto:

- a mixture of styrene polymers (a) and styrene-diene elastomers (b),
- a mixture of styrene polymers (a) and a polymer (c) including ethylene homopolymers and co-polymers,
- a mixture of styrene polymers (a) and a tackifying resin (d).

Beuzelin does not encompass a binder containing a mixture of polyethylene and an elastomer, very low density polyethylene, metallocene polyethylene or ethylene copolymer, co-grafted with an unsaturated carboxylic acid. All the Beuzelin co-graft components in its

binders are polystyrene co-grafts, distinct from applicants' co-graft component in the binder. The grafts discussed at page 4, line 26, to page 5, line 5, and page 9, lines 1-26, of Beuzelin are directed to mono-grafted polymers not co-grafts.

Accordingly, the rejection under 35 U.S.C. § 103 should be withdrawn.

The Second Rejection Under 35 U.S.C. § 103

The rejection of claim 9 under 35 U.S.C. § 103, as being obvious over Beuzelin in view of Zhang (U.S. Patent No. 5,516,583), is respectfully traversed.

Zhang does not disclose or suggest a HDPE/EVOH/PA structure. Thus, its combination with Beuzelin fails to make up for the above-noted deficiencies in suggesting the claimed invention.

Additionally, the combined teachings of Beuzelin and Zhang also fail to suggest using the binder recited in claim 9, now claim 29, in the Beuzelin structures. The Beuzelin reference is principally directed to the use of a specific binder defined at pages 3-5. There is no specific connection made between the Beuzelin and Zhang binders which would suggest to one of ordinary skill in the art why one of ordinary skill in the art would modify the specifically described Beuzelin binders to add one of the components taught by Zhang. Contrary to the implication in the Office Action, Zhang does not make a connection between the improved extrudability property and the metallocene polyethylene component.

There is no motivation provided in Zhang for modifying the Beuzelin binder to add a metallocene polyethylene. Beuzelin is specifically directed to providing a specifically defined binder. Nothing in Zhang would motivate one of ordinary skill in the art to change the composition of that binder or indicate what consequences the change would have.

Finally, if the binder is modified in the manner necessary to meet claim 29, then the binder is not in the nature of applicants' claimed third layer, thus, destroying this basis for rejection alleged in the Office Action.

Thus, this rejection under 35 U.S.C. § 103 should also be withdrawn.

The Third Rejection Under 35 U.S.C. § 103

The rejection of claims 10 and 15-17 under 35 U.S.C. § 103, as being obvious over Beuzelin in view of Melot (U.S. Patent No. 5,998,545), is respectfully traversed.

Melot does not disclose or suggest a HDPE/EVOH/PA structure. Thus, its combination with Beuzelin fails to make up for the above-noted deficiencies in suggesting the claimed invention. In fact, Melot fails to disclose any type of layered structure.

The basis for this rejection is that it would have been obvious to replace the alleged polyamide of Beuzelin with the polyamide mixtures of Melot. However, as pointed out above, Beuzelin fails to disclose a polyamide corresponding to applicants' third layer. Thus, there is nothing in Beuzelin for which one of ordinary skill in the art would be motivated to replace with the polymers disclosed by Melot. Further, even if Beuzelin had a polyamide layer, there is nothing in the Melot disclosure which would motivate one of ordinary skill in the art to replace such a layer with the Melot materials. Melot discloses or suggests nothing about the use of its materials for a multilayer structure and there is no teaching or suggestion in Beuzelin to suggest the Melot materials would be useful as a layer in its structures. Combining different components from different prior art is only proper where the art (not applicants' own disclosure) provides some motivation for doing so. Applicant's own disclosure cannot be used as a blueprint or guide for reassembling different teachings from the prior art; see, e.g., Grain Processing v. American Maize, 5 USPQ2d 1788, 1792 (Fed. Cir.


1988); and Orthopedic Equipment Co., Inc. v. United States, 217 USPQ 193, 199 (Fed. Cir. 1983).

For the above reasons, it is urged that this rejection under 35 U.S.C. § 103 should also be withdrawn.

It is submitted that the claims are in condition for allowance. However, the Examiner is kindly invited to contact the undersigned to discuss any unresolved matters.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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